Supplementary Information

Surface Anchored Self-Assembled Reaction Center Mimics as Photoanodes Consisting of a Secondary Electron Donor, Aluminum(III) Porphyrin and TiO₂ Semiconductor

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Figure S1. ¹H NMR spectra of (a) AlPorF₃-Ph (b) PTZ-Py and (c) 1:1 mixture of AlPorF₃-Ph and PTZ-Py in CDCl₃. Asterisk indicates solvent peaks.



Figure S2. ¹H NMR spectra of (a) AlPorF₃-Ph (b) TTF-Py and (c) 1:1 mixture of AlPorF₃-Ph and TTF-Py in CDCl₃. Asterisk indicates solvent peaks.



Figure S3. Cyclic (black) and differential pulse (red) voltammograms of PTZ-Py with 0.1 M TBAP in CH₂Cl₂.



Figure S4. Femtosecond transient spectra at the indicated delay times of AlPorF₃-OH and (b) AlPorF₃-Ph-HMAH in o-DCB. The samples were excited at 400 nm, 100 fs laser pulses.



Figure S5. Spectral changes observed during first (a) oxidation of PTZ-Py, (b) oxidation of TTF-Py, (c) oxidation of AlPorF₃-Ph and (d) reduction of AlPorF₃-Ph in o-DCB containing 0.2 M (TBA)ClO₄.



Figure S6. Rise time profile representing charge injection of (a) AlPorF₃-Ph-TiO₂ and (b) AlPorF₃-TiO₂ photoanodes.